



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,499	04/18/2001	Frank Becker		7890

32116 7590 06/30/2006

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
500 W. MADISON STREET
SUITE 3800
CHICAGO, IL 60661

EXAMINER

LEE, EDMUND H

ART UNIT	PAPER NUMBER
----------	--------------

1732

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,499

Applicant(s)

BECKER ET AL.

Examiner

EDMUND H. LEE

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 8-10, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (USPN 5817263) in view of Newton (USPN 5660173). Taylor teaches the basic claimed process including a method for producing a respiratory filter (col 3, lns 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2); intermixing activated carbon with a meltable polymer to produce a mixture (col 3, lns 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2); and molding the mixture in a connecting part comprising an inner surface into which the mixture is formed against so as to make a molded piece and a substantially gastight connection between the molded piece and the inner surface of the connecting part and a molded piece and connecting part that can be operatively connected as a unit to a respirator filter unit (col 3, lns 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2). Taylor, however, does not teach using an inner surface with a complete or partial groove or tongue. Newton teaches a respiratory filter having a connecting part with complete or partial grooves or tongue (irregular surface) on an inner surface of the connecting part (fig 2); and using an irregular shaped inner surface in order to create a more homogenous and greater packing density in the bed than a smooth surface (col 7, lns 21-28; fig 2). Taylor and Newton are combinable because they are analogous with

Art Unit: 1732

respect to respiratory filters. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the dimpled inner wall design of Newton into the connecting part of Taylor in order to create a more homogenous and greater packing density in the bed of Taylor.

In regard to claims 8-10, 12 and 15, Taylor teaches operatively connecting the respiratory filter to a respirator or fan filter unit (col 5, lns 55-60)--as a note, it is inherent that the filter of Taylor would be operatively connected a respirator or fan filter in order to use the product; molding the mixture to make a positive gastight connection between the molded piece and the connecting part (col 8, lns 55-60)--as a note, it is inherent that a positive gastight connection is created in order to provide a gas filter; providing a connecting part comprising the step of providing a ring-shaped connecting part (figs 1-2); and heating the mixture under pressure in the connecting part during the step of molding the mixture (col 4, lns 63-67). Taylor, however, does not teach using an adapter that is separate from and attachable with the filter to the filter unit; snap-fitting the respirator filter to the adapter. In regard to using an adapter that is separate from and attachable with the filter to the filter unit, such is a mere obvious matter of choice dependent on the design of the filter unit and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process for making a respirator filter. Filters that connect to a filter unit via an adapter are well-known in the filter art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to design the filter of Taylor (modified) to fit to a releasable adapter that connects to a filter unit in order to diversify the filter of Taylor

Art Unit: 1732

(modified). In regard to snap-fitting the respirator filter to the adapter, it is well-known in the molding art to connect parts by snap-fit. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a connecting part having snap-fit capability in the process of Taylor in order to ensure a good connection between the connecting part and the respirator or fan filter unit.

3. Claims 1,8-10, 12, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (USPN 5817263) in view of Kelman et al (USPN 6776944). In regard to claim 1, Taylor teaches the basic claimed process including a method for producing a respiratory filter (col 3, Ins 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2); intermixing activated carbon with a meltable polymer to produce a mixture (col 3, Ins 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2); and molding the mixture in a connecting part comprising an inner surface into which the mixture is formed against so as to make a molded piece and a substantially gastight connection between the molded piece and the inner surface of the connecting part and a molded piece and connecting part that can be operatively connected as a unit to a respirator filter unit (col 3, Ins 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2). Taylor, however, does not teach using an inner surface with a complete or partial groove or tongue. Kelman et al teaches a molding process that involves mechanically locking a molding material to a preform by using a groove and tongue connection (figs 1-7)--it should be noted that the groove of Kelman et al extends continuously substantially completely around the inner surface of the preform (fig 5). Taylor and Kelman et al are combinable because they are analogous with respect to molding a material against an inner surface of a preform. Thus, it would have been

Art Unit: 1732

obvious to one of ordinary skill in the art at the time the invention was made to form a complete or partial groove or tongue into the inner surface of Taylor as taught by Kelman et al in order to form a strong connection between the mixture and the inner surface.

In regard to claims 8-10, 12 and 15-16, Taylor teaches operatively connecting the respiratory filter to a respirator or fan filter unit (col 5, lns 55-60)--as a note, it is inherent that the filter of Taylor would be operatively connected a respirator or fan filter in order to use the product; molding the mixture to make a positive gastight connection between the molded piece and the connecting part (col 8, lns 55-60)--as a note, it is inherent that a positive gastight connection is created in order to provide a gas filter; providing a connecting part comprising the step of providing a ring-shaped connecting part (figs 1-2); and heating the mixture under pressure in the connecting part during the step of molding the mixture (col 4, lns 63-67). Taylor, however, does not teach using an adapter that is separate from and attachable with the filter to the filter unit; snap-fitting the respirator filter to the adapter; and a groove or tongue that extends continuously substantially completely around the inner surface. In regard to using an adapter that is separate from and attachable with the filter to the filter unit, such is a mere obvious matter of choice dependent on the design of the filter unit and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process for making a respirator filter. Filters that connect to a filter unit via an adapter are well-known in the filter art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to design the filter of Taylor

Art Unit: 1732

(modified) to fit to a releasable adapter that connects to a filter unit in order to diversify the filter of Taylor (modified). In regard to snap-fitting the respirator filter to the adapter, it is well-known in the molding art to connect parts by snap-fit. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a connecting part having snap-fit capability in the process of Taylor in order to ensure a good connection between the connecting part and the respirator or fan filter unit. In regard to a groove or tongue that extends continuously substantially completely around the inner surface, such is taught by the combination of Taylor and Kelman et al.

4. Claims 2, 4-7, 13-14, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (USPN 5817263). in view of Newton (USPN 5660173). Taylor teaches the basic claimed filter including a mixture of activated carbon with a meltable polymer, which has been pressed into a molded piece (col 3, lns 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2); a connecting part that is in a substantially gastight connection with the molded piece, wherein the connecting part comprises an inner surface into which the mixture is formed against, and the connecting part can be operatively connected as a unit to a respirator filter unit (col 3, lns 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2). Taylor, however, does not teach an inner surface with a complete or partial groove or tongue. Newton teaches a respiratory filter having a connecting part with complete or partial grooves or tongue (irregular surface) on an inner surface of the connecting part (fig 2); and using an irregular shaped inner surface in order to create a more homogenous and greater packing density in the bed than a smooth surface (col 7,

Art Unit: 1732

Ins 21-28; fig 2). Taylor and Newton are combinable because they are analogous with respect to respiratory filters. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the dimpled inner wall design of Newton into the connecting part of Taylor in order to create a more homogenous and greater packing density in the bed of Taylor.

In regard to claims 4-7, 13-14, and 18-21, Taylor inherently teaches the filter of Taylor being placed in a housing (adapter), which is connected to the respirator filter unit. Taylor does not teach a connecting part having fasteners on its periphery for a detachable gastight connection to a respirator or fan filter unit; a connection to an filter unit that is direct and detachable; fasteners that are designed for snap-in or threaded connection; a connecting part made of a polymer with a higher melting point than the polymer of the molded piece, or of cardboard or metal; the filter being operatively connected directly to the filter unit; at least one fastener on the periphery of the connecting part for substantially gastight connect to an adapter; an adapter that has a threaded portion; and the adapter surround the periphery of the connecting part. In regard to a connecting part having fasteners on its periphery for a detachable gastight connection to a respirator or fan filter unit, it is well-known in the molding art to attach a preform to a shell or another component by fasteners. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the claimed design into the connecting part of Taylor in order to facilitate the attachment of the connecting part to shell or another component. In regard to a connection to a filter unit that is direct and detachable, such is well-known in the filter art in order to

Art Unit: 1732

ensure proper sealing. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the connection direct and detachable in order to achieve the above result. In regard to fasteners that are designed for snap-in or threaded connection, such are well-known fastening means in the filter art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the claimed design into the connecting part of Taylor in order to facilitate the attachment of the connecting part to another part. In regard to a connecting part made of a polymer with a higher melting point than the polymer of the molded piece, or of cardboard or metal, connecting parts made of the claimed material are well-known. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a connecting part of the claimed material in the apparatus of Taylor in order to produce a high-quality filter unit. In regard to the filter being operatively connected directly to the filter unit, it is well-known to design a filter that can be directly connected to a filter unit. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to design the connecting part of Taylor to be capable of direct connection to a filter unit in order to reduce complexity and increase ease of use. In regard to at least one fastener on the periphery of the connecting part for substantially gastight connect to an adapter, such is well-known in the molding art in order to allow for connection between parts. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide at least one fastener on the periphery of the connecting part in order to allow for good connection between the part and an adapter. In regard to an adapter that has

Art Unit: 1732

a threaded portion, such is well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an adapter with threaded portions in order to ensure proper connection between the part and the adapter. In regard to the adapter surround the periphery of the connecting part, such is well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an adapter that surround the periphery of the part in order to ensure proper connection between the part and the adapter. In regard to the periphery of the connecting part is a snap-in or threadably connected to the adapter, such fastening means are well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect the part and the adapter through a snap-in or threaded connection in order to ensure proper connection between the part and the adapter.

5. Claims 2, 4-7, 13-14, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (USPN 5817263). in view of Kelman et al (USPN 6776944). Taylor teaches the basic claimed filter including a mixture of activated carbon with a meltable polymer, which has been pressed into a molded piece (col 3, lns 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2); a connecting part that is in a substantially gastight connection with the molded piece, wherein the connecting part comprises an inner surface into which the mixture is formed against, and the connecting part can be operatively connected as a unit to a respirator filter unit (col 3, lns 40-65; col 4, ln 42-col 5, ln 60; and figs 1-2). Taylor, however, does not teach an inner surface with a

Art Unit: 1732

complete or partial groove or tongue. Kelman et al teaches a molding process that involves mechanically locking a molding material to a preform by using a groove and tongue connection (figs 1-7)--it should be noted that the groove of Kelman et al extends continuously substantially completely around the inner surface of the preform (fig 5). Taylor and Kelman et al are combinable because they are analogous with respect to molding a material against an inner surface of a preform. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the dimples or depression of Taylor

In regard to claims 4-7, 13-14, and 17-21, Taylor inherently teaches the filter of Taylor being placed in a housing (adapter), which is connected to the respirator filter unit. Taylor does not teach a connecting part having fasteners on its periphery for a detachable gastight connection to a respirator or fan filter unit; a connection to an filter unit that is direct and detachable; fasteners that are designed for snap-in or threaded connection; a connecting part made of a polymer with a higher melting point than the polymer of the molded piece, or of cardboard or metal; the filter being operatively connected directly to the filter unit; a groove or tongue that extends continuously substantially completely around the inner surface; at least one fastener on the periphery of the connecting part for substantially gastight connect to an adapter; an adapter that has a threaded portion; and the adapter surround the periphery of the connecting part. In regard to a connecting part having fasteners on its periphery for a detachable gastight connection to a respirator or fan filter unit, it is well-known in the molding art to attach a preform to a shell or another component by fasteners. Thus, it would have

Art Unit: 1732

been obvious to one of ordinary skill in the art at the time the invention was made to include in the claimed design into the connecting part of Taylor in order to facilitate the attachment of the connecting part to shell or another component. In regard to a connection to a filter unit that is direct and detachable, such is well-known in the filter art in order to ensure proper sealing. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the connection direct and detachable in order to achieve the above result. In regard to fasteners that are designed for snap-in or threaded connection, such are well-known fastening means in the filter art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the claimed design into the connecting part of Taylor in order to facilitate the attachment of the connecting part to another part. In regard to a connecting part made of a polymer with a higher melting point than the polymer of the molded piece, or of cardboard or metal, connecting parts made of the claimed material are well-known. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a connecting part of the claimed material in the apparatus of Taylor in order to produce a high-quality filter unit. In regard to the filter being operatively connected directly to the filter unit, it is well-known to design a filter that can be directly connected to a filter unit. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to design the connecting part of Taylor to be capable of direct connection to a filter unit in order to reduce complexity and increase ease of use. In regard to a groove or tongue that extends continuously substantially completely around the inner surface, such is

Art Unit: 1732

taught by the combination of Taylor and Kelman et al. In regard to at least one fastener on the periphery of the connecting part for substantially gastight connect to an adapter, such is well-known in the molding art in order to allow for connection between parts.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide at least one fastener on the periphery of the connecting part in order to allow for good connection between the part and an adapter. In regard to an adapter that has a threaded portion, such is well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an adapter with threaded portions in order to ensure proper connection between the part and the adapter. In regard to the adapter surround the periphery of the connecting part, such is well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an adapter that surround the periphery of the part in order to ensure proper connection between the part and the adapter. In regard to the periphery of the connecting part is a snap-in or threadably connected to the adapter, such fastening means are well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect the part and the adapter through a snap-in or threaded connection in order to ensure proper connection between the part and the adapter.

6. Applicant's arguments with respect to claims 1-2,4-10, and 12-21 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 1732


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571.272.1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EHL

EDMUND H. LEE
Primary Examiner
Art Unit 1732


6/24/06